

REMARKS

Claims 1-22 were presented in the application as filed, and claim 14 was cancelled in the response dated March 2007. Therefore, claims 1-13 and 15-22 are currently pending and under consideration.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1-4, 6, 7 9-13, 20 and 21 are rejected under 35 U.S.C. §103(a) as being obvious over JP 11-307266, to Hori, *et al.*, in view of US 5,396,570, to Jenkins. The rejection is traversed.

JP 11-307266 relates to organic light emitting devices that have monochromatic emission wavelength (paragraph 0020). The devices include an optical waveguide formed from a transparent electrode and dielectric layer of periodically varying refractive index disposed on a glass base (Abstract). FIG. 7 illustrates an embodiment where the dielectric layer is composed of silicon oxide and titanium dioxide (paragraph 0063). FIG. 2 discloses an embodiment where the dielectric layer is composed of titanium dioxide and zinc sulfide (paragraph 0048). US 5,396,570, to Jenkins relates to optical devices that incorporate a rectangular waveguide (Abstract). In one embodiment, the waveguide was composed of alumina (col. 12, line 23).

The Office action states that Hori *et al.* disclose a device and method that includes a ceramic output coupler which comprises a ceramic material and a plurality of voids distributed therein, asserting without supporting evidence that "ceramic materials are inherently porous; also the periodically repeating ceramic materials in layer 97 create voids between the titanium oxide [sic] and silica [sic] oxide" (page 2, last two lines). It further states that Jenkins, *et al.* disclose a ceramic output coupler made of alumina (page 3, paragraph 1) and concludes that it would have been obvious to modify the device of Hori to include alumina (page 3, paragraph 2).

With respect, Applicants submit that the Office action has mischaracterized not only the teachings of the references but also the art regarding the properties of ceramic materials. In contrast to what the Office action asserts, ceramic materials are not

inherently porous. Materials such as single crystals or glasses have no pores at all. The scientific and patent literature abounds with references to non-porous ceramics, including non-porous alumina; see, for example, US 6,188,812 and US 3,897,358. Furthermore, Hori is completely silent regarding porous ceramics. In fact, one of ordinary skill in the art would be aware that porosity and/or the presence of voids within or between the materials used in the various dielectric layers described by Hori would be undesirable, because the voids would reduce or prevent the constructive interference of the propagating light and resonance in the direction parallel to the glass base with a specific wavelength that results in only the light of a specific wavelength being selectively coupled out of the base. Jenkins is likewise silent regarding porous ceramics. Therefore, since neither reference teaches nor suggests use of a ceramic material containing voids in an optical waveguide, Applicants submit that claims 1-4, 6, 7 9-13, 20 and 21 are not obvious in view thereof. It is believed that the rejection is hereby overcome.

Claims 5, 8, and 15-19 are rejected under 35 U.S.C. §103(a) as being obvious over JP 11-307266, in view of US 5,396,570, in further view of US 5,396,570 or US 6,472,817. Neither of the tertiary references supply the deficiency of Hori and Jenkins discussed above. Applicants submit therefore that none of the claims are obvious in view of any combination of the cited references, and it is believed that all claims are patentable thereover.

In view of the foregoing arguments, the Applicants respectfully request reconsideration and allowance of claims 1-22.

Respectfully submitted,

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